

Work Order ID 131968

131968

Tuesday, April 21, 2015 1:58:33 PM



Item ID: D350-591-312

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15 Start Qty: 10.00 ***10***

Cust Item ID:

Required Date: 6/01/15 Req'd Qty: 10.00 ***10***

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 15-04-22 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D3272	Rev B								

100	Document Control	0.00							
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100

DC

Doc.Control -USB or Paperwork

Memo

0.00

Photocopy bluefile and type labels as per PPP D350-591-312 CHG001

DAS
6
9-89 ✓

MAY 28 2015

110

110

Large Fab

Large Fab

Large Fab

Memo

0.00

1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT10115, weld Fwd End Plate as per QSI 004 & Dwg D3272

A/R Aluminum Rod M127865 / M130137

3-Grind End Plate flush Dec 16-5-12

BE15-05-11



P.T.O.

DQA:

Date:

15/06/05

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed:

Date:

15/06/01

Work Order update only

Work Order: <u>131968</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. <u>D350-591-312</u>		Rework ☒		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
NCR No. <u>15-5043</u>		Scrap ☐		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Suspected Unapproved ☐		Large Fab ☒	Composite ☐	Supplier ☐	
Date: <u>15-05-20</u>	Step #: <u>110</u>	QTY Effective: <u>(2)</u>				MRB (QSI042) Approval	
Description Work Order Deviation		Disposition				DAS 16 9-89 <u>15/05/20</u>	
D3219-1 crack during welding		Scrap & replace				Completed By	
RC. too much heat, employee in training.		- "scrap" step will be use for making short step - weld new step as per drawing and QSI042 D3219-1 B132851 2x D3067-1 B131954 2x				BE <u>15-05-20</u> Lead hand / Supervisor Approval Verification	
		train employee on proper welding process. and record in job training log. <u>PD 15-05-20</u>				QC / QA Coordinator Approval DAS 9 9-89 <u>15-05-20</u>	
Root Cause		FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	☒ Weld	Part Incorrect ☐		
Handling/Pre ☐	☒ Training	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐						
Misidentified ☐	Past Due ☐	OTHER :					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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NS1

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NS2

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Start Date: 5/24/15

Start Qty: 10.00

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Required Date: 6/01/15

Req'd Qty: 10.00

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

**DAS
18
9-00**

150

QC7-Inspect Chemical Conversion Coat

0.00

150

QC

Memo

0.00

Quality Control

10 0 15-05-13

180

0.00

180

Large Fab

Large Fab

Memo

0.00

Large Fab

1-Assemble Leg Assembly as per Dwg D3272.

2-Leave one rivet out until welding is complete.

3-Bevel Aft end for welding

4-Inspect for foreign object as per QSI 024

5-Weld Aft End Plate as per QSI 004 & Dwg D3272

A/RAluminum Rod M130137

6-Grind End Plate flush — DGC

7-Install last rivet as per Dwg.

BE 15-05-14

15-5-14

DQA: _____ Date: _____



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			Lead hand / Supervisor Approval Verification		
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190

QC10- Inspect visual per QSI004- ground welds

0.00

190

QC

Memo

0.00

Quality Control

⑩ 15-05-19

DAS
9
9-89

200

QC5- Inspect part completeness to step on W/O

0.00

200

QC

Memo

0.00

Quality Control

⑩ 15-05-19

DAS
9
9-89

210

Chemical Conversion Coat per QSI005 4.1

0.00

210

HandFinish

Memo

Hand Finishing

POSITIVE RECALL

EFFECTIVE

AUTM

RELEASED

DATE

15-5-14
15/05/19

* inspectors not available was at end of day

10 0 15-5-14 JGC



Alodine Bebel
insp. AS per
N.F.

Ncr 15-4963

15-5-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Stop *NR2*

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220	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
220	<i>M B1545.</i>					<i>10</i>	<i>0</i>	<i>15-5-22</i>	<i>DAS 34 9-89</i>
Powdercoat	Memo	0.00							
Powder Coating	START TIME: <i>10:35.</i>								
	OVEN TEMPERATURE: <i>320°</i>								
	FINISH TIME: <i>11:05.</i>								
230	Wing Walk as per dwg QSI005 4.4 Batch <i>141320304</i>								
230									
HandFinish	Memo	0.00							
Hand Finishing									
240	QC3- Inspect Part Finish	0.00							
240									
QC	Memo	0.00							
Quality Control									

DAS 36 9-89

MAY 26 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Description Work Order Deviation				Disposition				Completed By																																																															
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OTHER :																																																																							

Work Order ID 131968

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131968

Page 6

Item ID: D350-591-312

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Start Qty: 10.00

10

Cust Item ID:

Required Date: 6/01/15

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool # Plan
Code

Accept

Reject
QtyReject
NumberInsp.
Stamp

250

Pick Kit

0.00

250

Packaging

Memo

0.00

Packaging

10X
DAS
27
MAY 27 2015
9-89

DAS

26

9-89

260

QC4- 100% Inspect kits for completeness

0.00

260

QC

Memo

0.00

Quality Control

10 MAY 28 2015

DAS

6

9-89

270

Packaging

0.00

270

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPPD350-591-312

Location: 4A11

10 MAY 29 2015

DAS

6

9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge
☐ LOA	☐ Substation	☐ Past Expiry Date	☐ Misidentified	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier
				☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing
				☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due
				☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ OTHER :			
				☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes			
				☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center			
				☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence			

Work Order ID 131968

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131968

Page 7

Item ID: D350-591-312

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Start Qty: 10.00

10

Cust Item ID:

Required Date: 6/01/15

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21 - Final Inspection - Work Order Release

0.00

MAY 29 2015

280

QC

Memo

0.00

Quality Control

ML5

ML5 MAY 29 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

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Page 1

Work Order ID: 131968

131968

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Required Date: 6/01/15

Start Qty: 10.00

Required Qty: 10.00

Comments:

IPP Rev:A04.03.22New issue KJ/RF

IPP Rev:B 07-06-09 Added D3572-1 JLM

IPP Rev:C 08-04-02 ECN1163 DD verified by:EC

IPP Rev:D 08-04-08 ECN1164 DD verified by:eC IPP Rev:D

fixe route seq in bom DD 10.04.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3272-1		Manufactured	No			110	Each	20.0000	1	10			
D3272-1													
Step													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA003		20							
				130649		10							
				130650		10							
D3067-1		Manufactured	No			110	Each	48.0000	1	10			
D3067-1													
End Plate													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA003		48							
				117776		1							
				119290		12							
				129522		35							
D3219-1		Manufactured	No			110	Each	61.0000	2	20			
D3219-1													
Plate													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				WA003		61							
				129077		23							
				130857		38							

BE15-05-07
B131734 x10

B132851 x2

BE15-05-11
B131954 x2
B131954 x2

8

BE15-05-11
B131710 x37
B131710 x4

13

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : _____									

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Page 2

Work Order ID: 131968

131968

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Required Date: 6/01/15

Start Qty: 10.00

Required Qty: 10.00

D3066-1 Manufactured No 180 Each 31.0000 2 20

D3066-1

Spacer

**

BE 15-05-13

B131988 x17

Location Loc Qty Loc Code

WA003 31

125436 2

129078 29

MS20600-AD4W4 Purchased No 180 Each 298.0000 16 160

MS20600-AD4W4

Rivets

**

BB/D 15-5-14

Location Loc Qty Loc Code

WA003 298

M131624 298

D3065-041 Manufactured No 180 Each 45.0000 1 10

D3065-041

Step Leg Assembly

**

150 + 10

BE 15-05-13

B131632 x10

Location Loc Qty Loc Code

WA003 45

128423 3

129079 20

129782 2

130919 20

D3067-1 Manufactured No 180 Each 48.0000 1 10

D3067-1

End Plate

**

BE 15-05-13

B131954 x10

Location Loc Qty Loc Code

WA003 48

117776 1

119290 12

129522 35

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Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

Picklist Print

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Work Order ID: 131968

131968

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Required Date: 6/01/15

Start Qty: 10.00

Required Qty: 10.00

AN3-35A

Purchased

No

250

Each

74.0000

2

20

AN3-35A

Bolt

8
-89

Location

Loc Qty

Loc Code

FG

10

122800

10

ST348

64

m131886

64

D3235-1

Manufactured

No

250

Each

44.0000

2

20

D3235-1

Mounting Lug

Location

Loc Qty

Loc Code

ST522

41

108670

13

116385

2

129772

26

ST539A

3

116383

3

D3278-041

Manufactured

No

250

Each

29.0000

1

10

D3278-041

Support/Assembly

Location

Loc Qty

Loc Code

ST523

29

130861

29

DAS
6
-89

DAS
6
-89

MAY 26 2015

DAS
27
-89

DAS
27
-89

MAY 26 2015

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Shop Packet Print

Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Large Fab ☐	Composite ☐	Supplier ☐																							
Date : _____		Step # : _____		QTY Effective : _____			MRB (QS1042) Approval																		
Description Work Order Deviation				Disposition			Completed By																		
							Lead hand / Supervisor Approval Verification																		
							QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____																			

Picklist Print

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Page 4

Work Order ID: 131968

131968

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Required Date: 6/01/15

Start Qty: 10.00

Required Qty: 10.00

NAS1149D0463J

Purchased

No

250

Each

5,164.000

16

160

NAS1149D0463J

WASHER

**

DAS
27
9-89

DAS
26
9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

GA

41

M129390

41

ST269

5123

M129682

86

M130799

403

M132035

4634

M13237

12

18

NAS1149D0563J

Purchased

No

250

Each

1,431.000

4

40

NAS1149D0563J

Washer

**

DAS
27
9-89

DAS
26
9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

GA

130

m125807

130

ST260a

1063

m130799

63

m132035

1000

ST269

156

m128257

156

ST271

82

m131026

82

40

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Page 4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

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Page 5

Work Order ID: 131968

131968

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Required Date: 6/01/15

Start Qty: 10.00

Required Qty: 10.00

AN5-36A

Purchased

No

250

Each

99.0000

2

20

AN5-36A

Bolt

**

DAS

27

9-89

DAS

26

9-89

DAS
6
9-89 ✓

Location

Loc Qty

Loc Code

ST299A

60

M131957

60

20

ST336

39

M130325

1

M130466

15

M131624

23

D2618

Manufactured

No

250

Each

104.0000

2

20

D2618

Bushing

**

DAS

27

9-89

DAS

26

9-89

DAS
6
9-89 ✓

Location

Loc Qty

Loc Code

ST008A

104

131022

104

20

D2230-3

Manufactured

No

250

Each

54.0000

4

40

D2230-3

Mounting Lug

**

DAS

27

9-89

DAS

26

9-89

DAS
6
9-89 ✓

Location

Loc Qty

Loc Code

FG

8

109344

4

89045

4

ST521

46

114921

3

116378

1

116379

2

123324

3

128799

37

B131696

40

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Page 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Work Order ID: 131968

131968

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Required Date: 6/01/15

Start Qty: 10.00

Required Qty: 10.00

D2856-400

Manufactured No

250 f

149.8400

12 12

D2856-400

Abrasion Strip 4" Wide (Per Foot)

DAS
6
9-89

Location

Loc Qty

Loc Code

ST418

149.84

128948

149.84

12
20

MS21042L3

Purchased No

250 Each

1,448.000

2 20

MS21042L3

Nut

DAS
6
9-89

Location

Loc Qty

Loc Code

FP001

420

M130922

420

GA

685

M131317

685

ST305

343

116549

12

126333

49

M128754

2

M131624

280

M132123

20

AN4-13A

Purchased No

250 Each

411.0000

8 80

AN4-13A

Bolt

DAS
6
9-89

Location

Loc Qty

Loc Code

FG

20

122808

20

ST325A

200

m131957

200

ST344

191

131677

191

M132317

80

DAS
27
9-89

MAY 26 2015

DAS
26
9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 131968

131968

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Required Date: 6/01/15

Start Qty: 10.00

Required Qty: 10.00

MS21042L5

Purchased

No

250

Each

311.0000

20

MS21042L5

Nut

**

DAS
27
9-89

DAS
26
9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

GA	150	
m127813	150	
ST305	161	
m127813	136	
m130388	4	
m131340	21	

m132123

20

MS21042L4

Purchased

No

250

Each

1,277.000

80

MS21042L4

Locknut

**

DAS
27
9-89

DAS
26
9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

FP001	42	
m124231	42	
GA	574	
m127813	574	
ST260a	118	
m130799	56	
m131803	62	
ST305	543	
426	426	
m128300	8	
m130922	97	
m131618	12	

m132123

80

MAY 26 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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OTHER : _____																																																																									

Picklist Print

Tuesday, April 21, 2015 1:58:33 PM

Page 8

Work Order ID: 131968

131968

Parent Item: D350-591-312

D350-591-312

Parent Item Name: Heli-Access-Step™ RH - High Gear, Long Step, Aerazur Float Compatible

Start Date: 5/24/15

Required Date: 6/01/15

Start Qty: 10.00

Required Qty: 10.00

NAS1149D0363J

Purchased

No

250

Each

1,719.000

40

NAS1149D0363.1

Washer

**

DAS

27

9-89

MAY 26 2015

DAS
6
9-89

Location

Loc Qty

Loc Code

CA

569

m130799

569

FP001

2

113288

2

GA

302

m128429

302

ST269

846

m126319

9

m131618

837

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
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OTHER : ☐					

DART

DESIGN <i>GP</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>H</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED*07.06.04*

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

GENERAL NOTES:

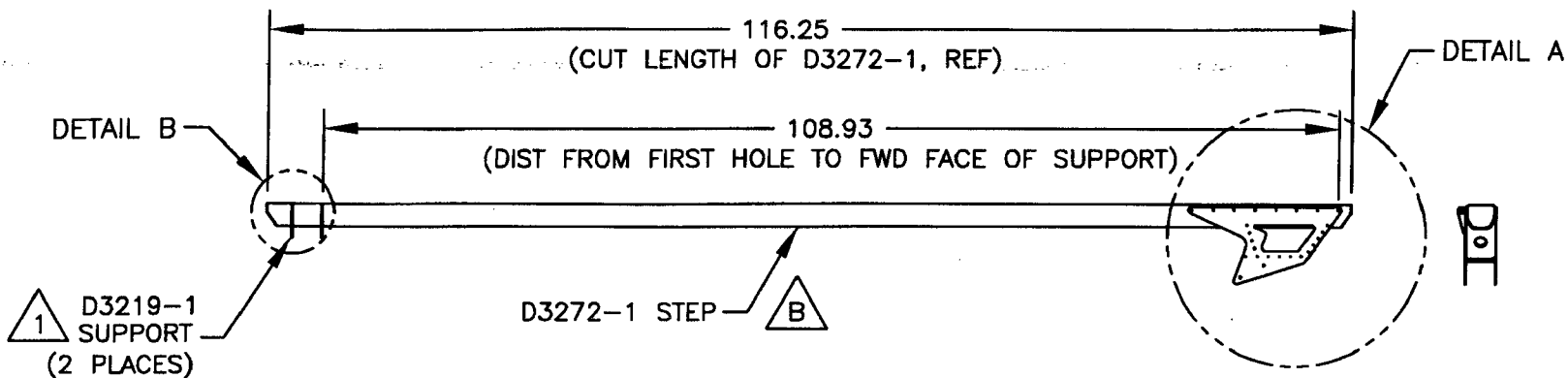
- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005.4.3
BLACK ANTI-SKID PAINT PER DART QSI 005.4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

*M. 131968 MCT
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DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED <i>CE</i>	APPROVED <i>[Signature]</i>	REV. B
DATE 07.05.18	TITLE STEP ASSEMBLY, HI LONG	SHEET 2 OF 3
		SCALE 1:20



D3272-041 STEP ASSEMBLY (LH. SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)

